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Arai et al.

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[30] **Foreign Application Priority Data**

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[52] **U.S. Cl.** **382/187; 382/228; 382/309**

[58] **Field of Search** 382/187, 224, 382/226, 227, 309, 311, 209, 310, 228

[56] **References Cited****U.S. PATENT DOCUMENTS**

3,988,715 10/1976 Mullan et al. 382/228
4,944,022 7/1990 Yasujima et al. 382/14
4,958,375 9/1990 Reilly et al. 382/36
4,958,379 9/1990 Yamaguchi et al. 382/310
5,054,093 10/1991 Cooper et al. 382/36

5,191,622 3/1993 Shojima et al. 382/13
5,257,323 10/1993 Melen et al. 382/228
5,305,394 4/1994 Tanaka 382/13

FOREIGN PATENT DOCUMENTS

57-45680 3/1982 Japan .
57-187780 11/1982 Japan G06K 9/02
58-223887 12/1983 Japan .

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[57] **ABSTRACT**

A pattern recognition system having a plurality of dictionaries, wherein handwritten input information is compared with patterns contained in the plurality of dictionaries so as to deliver a similar one of the patterns as a recognized result; The system comprises a controller which selects one pattern as a final recognized result from among recognized results based on the plurality of dictionaries, so as to deliver the selected pattern as its output. The controller evaluates summations of values previously set for respective candidate levels in the recognized results, for individual candidate patterns which exist in the recognized results based on the plurality of dictionaries, and it selects the pattern of the final recognized result on the basis of the summations. Thus, the recognized result most suited to a user is automatically derived from among the recognized results based on the plurality of dictionaries.

9 Claims, 8 Drawing Sheets